UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/595,012	12/16/2005	Jan Lindskog	P17752-US1	1229

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EXAMINER
CHAMBERS, TANGELA T

ART UNIT	PAPER NUMBER
2617	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/595,012	LINDSKOG ET AL.
	Examiner	Art Unit	
	TANGELA T. CHAMBERS	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>17 June 2008</u>.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-20</u> is/are pending in the application.

  4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-20</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>17 June 2008</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

  a)☐ All b)☐ Some * c)☐ None of:

  1.☐ Certified copies of the priority documents have been received.

  2.☐ Certified copies of the priority documents have been received in Application No. _____.

  3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

  * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

DETAILED ACTION

1.   This action is in response to the amendment and arguments filed on 6/17/2008.

2.   Claims 1-20 are rejected.

Specification

3.   **The disclosure is objected to because of the following informalities:**

Reference characters <u>DCCH1, step 415, step 417 and step 418</u> are represented in the drawings but are not mentioned in the description.

Appropriate correction is required.

Response to the Arguments

4.   The applicant's arguments filed on 6/17/2008 have been fully considered, but they are not persuasive. In the Remarks, the applicant has argued in substance:

(1)   The applicant argued features, i.e., a method for allocating channel resources in a radio communications system including receiving a request for allocation of a channel resource and allocating a specific channel resource based on estimates of when the specific channel resource as well as previously allocated channel resources will be released.

Response:

(1)   The argued features read upon Magnusson.

Magnusson discusses allocating radio channels. Thus Magnusson shows the limitation of "allocating channel resources in a radio communications system".

Magnusson discusses a code allocation unit receiving requests from different services for connection. Thus Magnusson shows the limitation of "receiving a request for allocation of a channel resource".

Magnusson discusses a code allocation unit allocating one of plural Orthogonal Variable Spreading Factor (OVSF) codes to a radio access connection for use as a

channelization code. Thus Magnusson shows the limitation of "allocating a specific channel resource".

Magnusson discusses assigning a weight to a code based on statistics for different types of services and individual user behavior to predict how long the code will be allocated. Thus Magnusson shows the limitation of "considering an estimate of when a specific channel resource will be released".

Magnusson discusses assigning a combined weight to previously allocated codes based on statistically derived values such as service type or individual user behavior to predict duration of allocation. Magnusson also discusses assigning each user allocated a code a unique weight calculated from such things as type of radio access bearer that is requested and typical user behavior to predict how long the user is expected to occupy the code. Thus Magnusson shows the limitation of considering "estimates of when other previously allocated channel resources will be released".

(2)   Regarding the applicant's arguments within several of the dependencies, Magnusson shows those limitations.

As a result, the argued features read upon the reference as follows:

Claim Rejections - 35 USC § 102

5.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-20 are rejected under 35 U.S.C. 102(e) as being anticipated by
Magnusson (US Patent Publication No. 2003/0099282 A1).

As per claims 1 and 11, Magnusson discloses:

-       *A method for allocating channel resources in a radio communication
system, the method comprising:* (Magnusson, Abstract, "A code allocation unit (100)
of a radio access telecommunications network allocates one of plural Orthogonal
Variable Spreading Factor (OVSF) codes to a radio access connection for use as a
channelization code");

-       *receiving a request for allocation of a channel resource;* (Magnusson, Page
2, Paragraph [0014]);

-       *allocating a specific channel resource according to a predetermined rule
which includes considering an estimate of when said specific channel resource
will be released and estimates of when other previously allocated channel
resources will be released.* (Magnusson, Page 3, Paragraphs [0024]-[0031], "In
certain modes, the weights can be values related, e.g., to duration of allocation. Such
weights referenced are values can be statistically derived. For example, the statistically-
derived weights can be based on service type or on individual user behavior."), In using
the duration of the allocation based on service type or individual user behavior to
allocate a channel resource, Magnusson teaches a method of allocation with
consideration of when a channel resource will be released.

As per claims 2 and 12, Magnusson further discloses:

-       *said radio communication system is a Code Division Multiple Access
based system and said channel resources are spreading codes.* (Magnusson,
Page 4, Paragraph [0051]).

As per claims 3 and 13, Magnusson further discloses:

-       *said spreading codes are Orthogonal Variable Spreading Factor codes*
(Magnusson, Page 4, Paragraph [0052]).

As per claims 4 and 14, Magnusson further discloses:

- ***said channel resources include at least two higher level channel resources said higher level channel resources being associated with at least two lower level channel resources each such that a higher level channel resource is available for allocation only when all lower level channel resources associated with said higher level channel resource also are available for allocation,*** (Magnusson, Fig. 1 – Fig. 2B and Pages 1-2, Paragraphs [0012]-[0013], "Free…No codes in the subtree to (c) and in the branch that leads from (c) to the tree root is busy"), Magnusson teaches channel resources with the higher level resource being available for allocation only when the lower channel resources are available for allocation.

- ***said lower level channel resources having higher spreading factors than said higher level channel resources.*** (Magnusson, Fig. 1 and Page 1, Paragraph [0011]).

As per claims 5 and 15, Magnusson further discloses:

- ***said channel resources are hierarchically organized and include at least two higher level channel resources, said higher level channel resources being associated with at least two lower level channel resources each such that a higher level channel resource is available for allocation only when all lower level channel resources associated with said higher level channel resource also are available for allocation.*** (Magnusson, Fig. 1 – Fig. 2B and Pages 1-2, Paragraphs [0012]-[0013]), Magnusson teaches hierarchically organized channel resources with the higher level resource being available for allocation only when the lower channel resources are available for allocation.

As per claims 6 and 16, Magnusson further discloses:
according to said predetermined rule:

-        *if at least two lower level channel resources are available candidates for allocating as said specific channel resource,* (Magnusson, Fig. 7A and Page 5, Paragraphs [0055]-[0056]).

-        *if said available candidates include both a first and a second subset of lower level channel resources, wherein said first and second subsets include at least one lower level channel resource each, and each lower level channel resource in said first subset is associated with a higher level channel resource which is currently available for allocation while each lower level channel resource in said second subset is associated with a higher level channel resource which is currently not available for allocation,* (Magnusson, Fig. 7A, Page 3, Paragraph [0022] and Page 5, Paragraph [0061]), Magnusson teaches a method of evaluating available resources based on the number of users at each level. In this manner, it is possible to determine which lower level channel resources have higher level channel resources that are already allocated.

-        *a lower level channel resource in said second subset is selected as said specific channel resource.* (Magnusson, Fig. 9 and Page 7, Paragraphs [0079]-[0081]), Magnusson presents an example according to an embodiment of his invention where there are two subsets, one with a higher level channel resource available and one with a higher level channel resource allocated. In accordance with the method taught by Magnusson, the lower level channel with the higher level channel resource allocated is selected.

As per claims 7 and 17, Magnusson further discloses:

-        *according to said predetermined rule, if said second subset includes at least two lower level channel resources, said predetermined rule includes comparing estimates for when the higher level channel resources associated with the lower level channel resources in said second subset will become available for allocation with the estimate of when said specific channel resource will be released.* (Magnusson, Page 2, Paragraph [0013], "Weight … Every code can be assigned a weight. The weight can be related, e.g., to how long this code will be

allocated (based on statistics for different types of services, individual user behavior, etc."), In assigning a weight based on service type or individual user behavior to allocate a channel resource, Magnusson teaches a method that is capable of estimating when a requested channel resource as well as an allocated channel resource will be released.

As per claims 8 and 18, Magnusson further discloses:

-         *according to said predetermined rule, if said second subset includes both a third and a fourth subset, wherein said third and fourth subsets include at least one lower level channel resource each, and each lower level channel resource in said third subset is associated with a higher level channel resource which is estimated to become available at the same time or after the estimated release of said specific channel resource while each lower level channel resource in said fourth subset is associated with a higher level channel resource which is estimated to become available before the estimated release of said specific channel resource,* (Magnusson, Pages 2-3, Paragraph [0021] and Fig. 7, Page 5, Paragraphs [0055]-[0058]), Magnusson teaches a method of using combined weight as a way to allocate resources. It is disclosed that the combined weight can be values related to the duration of allocation; therefore, different subsets would have different combined weights based on their estimated duration.

-         *a lower level channel resource in said third subset is selected as said specific channel resource.* (Magnusson, Fig. 7 and Page 5, Paragraph [0057]), Magnusson teaches that the channel resource at the level with the largest combined weight is allocated. Based on the method taught by Magnusson, a subset with a higher level channel resource which is estimated to become available at the same time or after the estimated release would be assigned a higher combined weight value than a subset with a higher level channel resource which is estimated to become available before the estimated release of said specific channel resource.

As per claims 9-10 and 19-20, Magnusson further discloses:

-       *according to said predetermined rule, if said third subset includes at least two lower level channel resources,* (Magnusson, Fig. 7A and Page 5, Paragraphs [0055]-[0056]).

-       *a lower level channel resource in said third subset which is associated with a higher level channel resource whose estimated time of becoming available for allocation is closest to the estimated time of release of said specific channel resource, is selected as said specific channel resource.* (Magnusson, Pages 2-3, Paragraph [0021] and Fig. 7, Page 5, Paragraphs [0055]-[0058]), Magnusson teaches a method of using combined weight as a way to allocate resources. It is disclosed that the combined weight can be values related to the duration of allocation; therefore, a lower level channel resource with a higher level channel resource whose estimated time of becoming available for allocation is closest to the estimated time of release would be assigned a higher combined weight value than a lower level channel resource with a higher level channel resource whose estimated time of becoming available for allocation is not as close to the estimated time of release as said specific channel resource.

Conclusion

6.   The prior art not relied upon but considered pertinent to applicant's disclosure is made of record and listed on form PTO-892.

THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.Any inquiry concerning this communication or earlier communications from the examiner should be directed to TANGELA T. CHAMBERS whose telephone number is 571-270-3168. The examiner can normally be reached Monday through Thursday, 9:00am-6:30pm Eastern Time.

    If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nick Corsaro, can be reached at telephone number 571-272-7876. The fax phone number for the organization where this application or proceeding is assigned is 571-270-4168.

    Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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August 1, 2008

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